REMARKS

Upon entry of the present amendment, claims 27, 28, 31, 34, 35 and 38 will have been amended to clarify the recitations of the present invention. These amendments are not intended to narrow the scope of the claims and are not made in view of the prior art. Accordingly, no prosecution history estoppel should attach to any of the herein contained amendments.

By the present response, no claims will have been canceled and no new claims will have been submitted for consideration by the Examiner. Accordingly, claims 27-46 will remain pending in the present application and are hereby resubmitted for examination.

In view of the herein contained amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection together with an indication of the allowability of all of the claims in the pending a present application. Such action is now believed to be appropriate and proper and is thus respectfully requested, in due course.

In the outstanding official action, the Examiner rejected all of the pending claims 27-46 under 35 USC 103(a) as being unpatentable over Zhang et al. (U.S. Patent Application Publication No. 2005/0088972) in view of Parkvall et al. (U.S. Patent No. 6,542,736).

As noted above, Applicants respectfully traverse the above node rejection and submit that it is inappropriate with respect to the combinations of features recited in each of Applicants' pending claims. In particular, Applicants respectfully submit that the disclosures of the references relied upon are inadequate and insufficient to disclose, teach, suggest, or even to render obvious the combinations of features recited in each of Applicants' claims. Further, even if combined as suggested by the Examiner, it is respectfully submitted that all of the recited features would not be disclosed by the two references relied upon by the Examiner in the outstanding official action.

Applicants' invention is directed to a method for broadcasting content, a method for receiving content, a transmission apparatus, a reception apparatus, as well as to a broadcast

system. Utilizing the combination of features recited in Applicants' independent claim 27 as a non-limiting example of features and aspects of the invention disclosed in the present application, the present application is directed to a method for broadcasting content to one or more mobile terminals. The method includes storing content, and a plurality of program configuration information, each program configuration information including a screen arrangement of the content, the screen arrangement indicating which of a plurality of media, including video, text, and still images is to be played as program content, and respective display positions of the plurality of media to be played on a screen. The method further includes broadcasting the content and the plurality of program configuration information to mobile terminals and, selecting, at each mobile terminal, without broadcasting server involvement, one of the plurality of program configuration information based on a transmission condition. Further, in the storing, the plurality of program configuration information are associated with respective transmission bands.

No proper combination of the references relied upon contain disclosures that are adequate or sufficient to render at least the above noted combination of features unpatentable.

In setting forth the rejection, the Examiner asserted that Zhang et al. discloses the program configuration information including a screen arrangement of the content. It is respectfully submitted that at least in this regard, the Examiner's assertion is incorrect and is not at all supported by the disclosure of Zhang et al. In particular, in making the above noted assertion, the Examiner directs Applicants' attention to page 3, paragraph 0040 of Zhang et al.

However, the above cited paragraph contains no relevant disclosure regarding a screen arrangement of the content. Rather, the above-cited paragraph discloses that, based on the broadcast or handover signaling received from a second access network, a mobile node determines transmission condition parameters such as bandwidth, delay, buffer size and the like of the second access network and is thus in a position to adjust its TCP (transmission control

protocol) window size to match the changed conditions. Accordingly, based upon the disclosure of Zhang et al. the sending or receiving access rate for the mobile TCP sender or receiver can be adjusted in the presence of a changeover between a heterogeneous access media based, for example, upon a handover operation. However, this paragraph, as well as the remainder of the disclosure of the Zhang et al does not disclose screen arrangement of the content. For at least this reason it is respectfully submitted that the claims pending in the present application are clearly patentable over the Examiner's proposed combination.

In this regard, Applicants note that even prior to the herein contained amendments of the claim language, the above noted recitation of the screen arrangement of the content was included in claim 27 and the Examiner did not in any manner discuss or even address this explicit recitation of Applicants' claim, except by referring to paragraph 0040 all of Zhang et al., which, as set forth above, is clearly deficient in any relevant disclosure with regard to this feature. Accordingly, the claims of the present application are submitted to be clearly patentable over the combination of references relied upon by the Examiner even prior to the herein contained amendments, at least based on the above deficiency of Zhang et al., which is not remedied by the disclosure of Parkvall et al.

Although, as noted above, the claims pending in the present application even prior to the instant amendment are clearly patentable over the references of record, Applicants have further amended the claims by the present response in order to even more further distance, distinguish and differentiate the features of the present application from the disclosure of the references relied upon, without in any manner acquiescing in the propriety of the Examiner's applied rejection.

In this regard, Applicants respectfully submit that the claim language amendments contained in the present paper are fully and adequately supported in the disclosure of the present application. In this regard, Applicants respectfully direct the Examiner's attention to paragraphs

[0103]-[0116] of corresponding U.S. Patent Application Publication No. 2006/0156360 and figures 8A and 8B. Furthermore, figure 7 illustrates, according to a non-limiting example of the present invention, screen configuration information that is described in SMIL.

As previously set forth, in the outstanding rejection, the Examiner relied upon paragraph [0040] of Zhang et al. which relates to adjustment of a TCP transmission window size to match changed conditions. However, this is rather remote from the recitations of Applicants' claims. In particular, and as is clear from the last several sentences of the above-noted paragraph, the TCP data rate relates to the amount of data that is or can be transmitted for a mobile TCP sender or receiver, based upon particular transmission conditions or parameters. This is not related to the screen arrangement of the content that is recited in the present claims. The screen arrangement of contents, as is self apparent, refers to the arrangement of the content on a screen and particularly relates to which of a plurality of media, such as and including video media, text media and still image media, is to be displayed in various display positions on the screen when the media is played as program content. This aspect of the present invention, which was previously explicitly recited in the claims and which has now been even further clarified by the present amendments, is not in any manner rendered obvious by the adjustment of the TCP transmission window size of Zhang et al.

In other words, as generally recited in e.g. claim 27, the present invention includes broadcasting, from a server to a plurality of terminals, content and a plurality of program configuration information which includes the screen arrangement of the content. The plurality of program configuration information are associated with respective transmission bands and the plurality of mobile terminals (which comprise the receiving side) can each select one of the plurality of program configuration information based on the particular transmission conditions relevant thereto.

In other words, the program configuration information describes the arrangement of the content on a screen and indicates which of the plurality of media (as defined to include video, text, and still images) is to be played as program content and the respective display positions of the plurality of media on the screen.

As a result of the features of the present invention, significant advantages and benefits are achieved. In particular, an advantage of the present invention is that the server transmits the content and the plurality of program configuration information via a one directional communication with a receiving terminal such as the mobile station. After such one directional transmission, the receiving terminal, in and of itself carries out processing without further involvement of the broadcasting server. In other words, once the one directional communication has been performed, the receiving terminal can select, without any further involvement or action being required from the server, and based upon the environment of the particular receiving terminal, appropriate program configuration information, from the plurality of program configuration information that was previously transmitted from (i.e. broadcast by) the server. Further, the receiving terminals can each display the content in an appropriate manner, in accordance with the particular capabilities of each particular receiving terminal.

In contrast to the above, and as mentioned previously, Zhang et al. discloses that the mobile terminal determines transmission condition parameters such as bandwidth, delay, buffer size and the like of the network, based on broadcast or handover signaling received from a second network and adjusts the TCP transmission window size to match the changed conditions.

This change or adjustment of the TCP window size in accordance with transmission conditions would be interpreted and understood to mean that the receiving side (i.e. the mobile terminal) communicates the TCP window size, which determines the amount of data that can be received, to the transmitting side (i.e. the base station), in accordance with the transmission conditions. Utilizing this information, the transmitting side (base station) controls the amount of

data to be transmitted. Accordingly one of ordinary skill in the art would clearly comprehend that the TCP window size adjustment is technically distinct from the content screen arrangement which is a feature of the present invention. Accordingly, Zhang et al. fails to disclose broadcasting a plurality of program configuration information describing content screen arrangement to a plurality of mobile terminals.

Accordingly, in view of the clear, substantial and significant shortcomings and deficiencies of the disclosure of the Zhang et al. document, it is respectfully submitted that the Examiner's interpretation thereof and application thereof with respect to the presently pending claims is inappropriate.

In setting forth the rejection, the Examiner admits that Zhang et al. does not disclose that the plurality of pieces of program configuration information are associated with respective transmission bands and that each mobile terminal selects, one of the plurality of program configuration information based upon a transmission condition as recited in the herein amended claims. Accordingly, the Examiner relies upon the disclosure of Parkvall et al. for a teaching of this explicitly recited feature.

Parkvall et al. relates to an efficient radio link adaptation and base station sector selection in a radio communications system in which a mobile terminal sends rapidly changing information related to the downlink transmission of packet data from a base station sector to the mobile terminal at a higher rate on a fast channel. The rapidly changing information may include current data transmission rate and/or a current base station sector identification. On the other hand, information that changes more slowly, such as the identification of a base station to handle the mobile terminal communication, is communicated to the base station at a lower rate on a slower channel.

Further, Parkvall et al. relates to "link adaptation" which may be accomplished by changing a transmit power of the base station as well as by changing the type of modulation and

amount of channel coding applied to the data to be transmitted by the base station. Furthermore, the link adaptation may also be performed in the uplink by the mobile terminal, as set forth at column 2, lines 24-36.

Parkvall et al. additionally discloses that a mobile terminal determines the signal quality of pilot signals from a plurality of sectors and antennas, transmitted from base stations, selects a sector and an antenna having an adequate maximum data transmission rate to maintain the transmission power level, from the pilot signals, and transmits information regarding the selected sector and antenna to the corresponding base station. Upon receipt of this information, the base station transmits a data packet to a mobile terminal by selecting the requested sector and antenna.

Accordingly, Parkvall et al. contains no disclosure regarding program configuration information which describes the screen arrangement of content and in which the screen arrangement indicates which of a plurality of media is to be played as program content and the respective display positions of the various media to be played on the screen. Accordingly, it is apparent that Parkvall et al. cannot supply at least the above noted deficiencies and shortcomings of the disclosure of the primary Zhang et al. reference. It additionally follows, that no proper combination of the disclosures of Zhang et al. and Parkvall et al. are adequate or sufficient to render unpatentable any of the claims in the present application, although the above discussion has focused primarily on the features recited in independent claim 27. In other words, for reasons substantially similar to those set forth above, the other independent claims in the present application are also submitted to be clearly patentable over the proposed combination of references relied upon by the Examiner.

In addressing Applicants' comments, in the outstanding official action, at page 6, item 10, the Examiner asserted that Parkvall et al. discloses unidirectional communication between a base station and a mobile device. It is respectfully submitted the Examiner's characterization of the Parkvall et al disclosure is inaccurate.

In setting forth his position, the Examiner relied upon columns 6, lines 37-46. However, the next paragraph of Parkvall et al. contradicts the Examiner's interpretation of the disclosure thereof. In particular, starting at line 49, Parkvall et al. discloses that the mobile terminal requests information and in so doing communicates over the radio interface by way of a base station. The mobile station or terminal provides information related to the maximum data rate in view of channel quality to the base station. The base station, upon receipt of such information transmits packet data to the mobile terminal by selecting the appropriate sector and data based on the information transmitted to the base station from the mobile station or terminal. Accordingly, it is abundantly apparent that Parkvall et al. also relates to bidirectional communication in a manner generally similar to that utilized by Zhang et al. Additional evidence that, contrary to the Examiner's assertion, Parkvall et al. relates to bidirectional and not unidirectional communication, can clearly be seen from figures 2, 11 and 12.

In this regard, Applicants respectfully submit that the disclosure of Zhang et al. as well as that of Parkvall et al. are related to bidirectional communication, which is significantly different than the present application and does not provide the above noted advantages of the present invention. In accordance with the features of the present invention, since the same relates to one directional communication, broadcast receiving terminals having different transmission conditions as well as receiving terminals having different display capabilities to display multimedia content in screen configurations in accordance with the display capabilities and transmission conditions of each receiving terminal, can select, from the plurality of program configuration information transmitted by the base station (i.e. broadcaster) the particular program configuration information that is appropriate for each respective terminal.

This is in distinct contrast to the disclosures of Zhang et al. and Parkvall et al which are directed to controlling the transmission rate of data to be transmitted from the transmitting side based on information about a sector and an antenna transmitted from the receiving side. This

requires bidirectional communication between the receiving and transmitting sides. On the other hand Applicants' invention allows a receiving terminal to select, based upon the particular environment of that receiving terminal, appropriate program configuration information, from a plurality of program configuration information that has been broadcast by the base station and enables the mobile terminal (i.e. the receiving terminal) to display content that is appropriate and in accordance with the capabilities of the particular receiving terminal without requiring further involvement or interaction with the broadcasting server (base station).

The various additional dependent claims are clearly patentable over the references of record based at least upon their dependence from a shown to be allowable base claim, as well as based on their additional recitations. An action to such effect is respectfully requested.

For each of the above reasons, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection together with an indication of the allowability of all the claims in the present application, in due course.

SUMMARY AND CONCLUSION

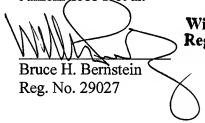
Applicants submit that they have made a sincere effort to place the present application into condition for allowance and believe that they have now done so. Applicants have amended the independent claim to define the patentable features of the present invention even more clearly and explicitly and to amplify the distinctions between the present invention and the disclosures of the references relied upon by the Examiner in the outstanding rejection.

Any amendments to the claims which have been made in this or in the previous amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should an extension of time be necessary to maintain the pendency of this application, including any extensions of time required to place the application in condition for allowance by an Examiner's Amendment, the Commissioner is hereby authorized to charge any additional fee to Deposit Account No. 19-0089.

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully Submitted,
Junichi SATO et al.



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